



Saint Lawrence Seaway Development Corporation

Seaway Asset Renewal Program (ARP) Annual Report to Congress



Fiscal Year 2018

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Background and Summary

As requested in the House Report (H. Rept. 116-9) of H.J. Res. 31 (Making Further Continuing Appropriations for the Department of Homeland Security for Fiscal Year 2019, and for Other Purposes), the Saint Lawrence Seaway Development Corporation (SLSDC or Corporation) is providing an annual report to the House and Senate Appropriations Committees on the status of its infrastructure Asset Renewal Program (ARP). Annual reports will be sent to the Committees over the life of the program. In addition, Committee staff will be updated throughout each year, as needed and upon request, on any significant changes to the plan's schedule, estimates, or execution.

The start of the ARP in 2009 represented the first time in the SLSDC's 50-year history that a comprehensive effort had been undertaken to modernize the Seaway infrastructure, including rehabilitation of and improvements to the U.S.-operated locks, the navigation channels, the Seaway International Bridge, and other Corporation-owned facilities and assets located in Upstate New York. None of the ARP projects increase the authorized depth or width of the navigation channel or the size of the lock facilities.

The Seaway comprises perpetual assets (locks, channels, an international bridge, highway tunnel, vessel traffic control system, and accompanying facilities and equipment), which require capital reinvestment to continue to operate safely, reliably, and efficiently. The U.S. portion of the St. Lawrence Seaway was built in the late 1950s at an original cost of approximately \$130 million. Prior to the start of the ARP in FY 2009, only \$47 million in capital expenditures had been cumulatively invested in the U.S. Seaway locks since they opened in 1959. Without sufficient investment in the SLSDC's perpetual assets, the future availability and reliability of the U.S. section of the St. Lawrence Seaway would be at risk. Although the SLSDC has maintained a 99 percent reliability rate over its history, the ARP is necessary to accomplish this level in the future.

Over its 60-year history, nearly 3 billion metric tons of cargo valued at more than \$450 million has moved through the St. Lawrence Seaway. This binational commercial transportation route impacts 237,000 U.S. and Canadian jobs and generates annual binational economic benefits of \$35 billion in economic activity, \$14.2 billion in personal income and local consumption expenditures, and \$6.6 billion in Federal, state/provincial, and local tax revenue.¹

In FY 2018, the SLSDC obligated \$8.1 million on 14 capital projects as part of its multi-year Asset Renewal Program.² ARP obligations included \$4.6 million to upgrade the floating plant, \$2.1 million to continue installation of hands-free mooring (HFM) technology at both locks, and \$605,000 to repair concrete at Eisenhower Lock.

In FY 2018, the SLSDC expended \$261,000 in personnel compensation and benefits (PC&B) for ARP-related staff time. Since the start of the program in FY 2009, SLSDC PC&B associated with the ARP has totaled \$5.6 million.

¹ *Economic Impacts of Maritime Shipping in the Great Lakes-St. Lawrence Region*, Martin Associates, July 2018.

² "Obligations" in this report refers to expenditures, open obligations, and SLSDC personnel compensation and benefits directly associated with ARP projects.

Each year following enactment of the SLSDC's appropriation, Corporation engineering, maintenance, and program officials finalize its ARP internal spending plan to re-allocate funding, deferring and accelerating projects as needed. In addition, SLSDC officials are continually making on-going internal budget adjustments throughout each fiscal year to ensure that current priority projects are funded. The flexibility to make the appropriate project and/or funding adjustments has been a major factor in the SLSDC's success in managing and implementing the program. While many ARP projects receive funding over several years, the SLSDC uses a multi-phased approach to develop each project to ensure annual funding produces usable, distinct, and tangible segments and avoids incremental funding, in accordance with OMB Circular A-11.

Through the first 10 years of ARP funding (FYs 2009-2018), the SLSDC has spent \$152 million on 50 separate projects (*see page 16*). These projects included maintenance dredging in the U.S. portion of the Seaway navigation channel, lock miter gate and culvert valve machinery upgrades, culvert valve replacements, hands-free mooring installation at the locks, gatelifter upgrades, miter gate rehabilitation, and the start of the tugboat replacement project, as well as various other structural and equipment repairs and/or replacement.

The SLSDC's ARP is resulting in not only modernized infrastructure and new equipment to ensure the long-term reliability of the St. Lawrence Seaway, but it is also having a positive and significant impact on the rural Upstate New York economy. Nearly one-half of ARP funds obligated during the program's first 10 years were awarded to contractors in the Upstate New York region. In addition to these contracts, the ARP is producing \$1-2 million in additional economic benefits (local permanent and temporary hires, local spending on supplies and equipment, lodging, meals, etc.) to the Massena, N.Y. region each year.³

The SLSDC's ARP closely coordinates with infrastructure renewal work completed or planned by the Canadian St. Lawrence Seaway Management Corporation (SLSMC) and supports the engineering considerations highlighted in the November 2007 binational *Great Lakes St. Lawrence Seaway Study*.⁴ The study evaluated the infrastructure needs of the U.S. and Canadian Great Lakes Seaway System and assessed the economic, environmental, and engineering implications of those needs pertaining to commercial navigation. As part of its ARP planning and implementation processes, the SLSDC is working closely with the SLSMC and U.S. Army Corps of Engineers (USACE) to leverage their expertise.

The Canadian Seaway locks along the St. Lawrence River are identical in age and design to those owned by the U.S. SLSDC. The Canadian Government has also addressed its own Seaway asset capital reinvestment needs. Together, the SLSDC and SLSMC have spent more than \$500 million over the past five years (2014-2018) on asset renewal projects. Many of the lock-related ARP improvements at the U.S. locks will parallel activities either completed, underway, or planned at the Canadian Seaway locks.

These significant investments clearly demonstrate the commitment of the United States and Canada to the long-term health and vitality of the binational waterway, complementing similar investments being made by many other Great Lakes Seaway System stakeholders, including ports, terminals, and carriers.

³ SLSDC ARP contract reports.

⁴ www.greatlakes-seaway.com/en/pdf/GLSL-Final-Report-En.pdf

In January 2015, a report was released highlighting public and private investments in the Great Lakes St. Lawrence Seaway navigation system.⁵ The report, which was based on a survey of more than 450 U.S. and Canadian public organizations and private companies, found that \$6.9 billion is being spent on asset renewal and infrastructure improvements in the Great Lakes St. Lawrence Seaway navigation system by both the public and private sectors. Between 2009 and 2013 more than \$4.7 billion was invested in ships, ports and terminals, and waterway infrastructure, while an additional \$2.2 billion in capital spending has been committed for infrastructure investments in the system by companies and governments.

To help ensure that the St. Lawrence Seaway opens each spring for navigation as scheduled, the SLSDC includes monetary incentives and/or disincentives for ARP contractors working on lock structures and operating components during the off-season winter months. For winter work completed ahead of a pre-determined, fixed date to open the Seaway on time, a monetary incentive is awarded. Conversely, if work is not completed by the fixed date, a monetary penalty is assessed. In addition, the SLSDC reserves the right to place additional personnel and/or equipment on projects as necessary to complete the winter work at the expense of the contractor. In FY 2018, no incentives were awarded or disincentives assessed and all work was completed on schedule.

Since the ARP's inception, the SLSDC's procurement division, working with the agency's engineering team, recognized the need to be able to award ARP-related support contracts quickly. Pursuant to Federal Acquisition Regulation (FAR), Subpart 16.5, the SLSDC advertised on Federal Business Opportunities (FedBizOpps.gov) in FY 2015 for qualified architecture/engineering (A/E) firms to support the ARP under an Indefinite Delivery Contract (IDC) for a base year with options for four additional years. Three firms received IDC awards in FY 2016 for these services – Bergmann Associates, Rochester, N.Y., WSP USA, Inc. (formerly Parsons Brinckerhoff), Buffalo, N.Y., and NKB & RAM-TECH JV, Syracuse N.Y. The SLSDC currently plans to use these A/E contractors to receive design support and expert advice on project plans, specifications, and drawings for those ARP projects that require such external resources. As support work is needed, the SLSDC plans to request proposals from the three firms in a streamlined process, with negotiations, as required, limited to only those firms. The SLSDC has maintained IDCs with A/E firms since the start of the ARP in FY 2009.

ARP baseline project estimates developed by the SLSDC used one or more of four estimation methods, as applicable: (1) historical costs for similar work completed previously by the SLSDC; (2) consultation with the U.S. Army Corps of Engineers (USACE) for similar work it completed at other U.S. locks; (3) consultation with the SLSMC for similar work it completed at the Canadian Seaway locks; and/or (4) utilization of data from RSMeans®, which serves as North America's leading supplier of construction cost information.

⁵ *Infrastructure Investment of the Great Lakes St. Lawrence Seaway System*, Martin Associates, January 2015.

FY 2018 ARP Funding Update

In March 2018, the SLSDC received its FY 2018 appropriation as part of the Consolidated Appropriations Act 2018 (P.L. 115-141). The SLSDC's appropriations bill language for FY 2018 stated, in relevant part: "...*That of the amounts made available under this heading, not less than \$19,500,000 shall be used on asset renewal activities and shall remain available through September 30, 2020.*"

While the SLSDC's only legal requirement for its annual, one-year Congressional appropriation from the Harbor Maintenance Trust Fund is to perform a full obligation transfer to its no-year revolving fund by September 30 each year, the SLSDC intends to obligate \$19.65 million from its FY 2018 appropriation on ARP projects in FYs 2018, 2019, and 2020.

The following information provides an update on SLSDC ARP funding from the FY 2018 appropriation:

ARP Funding from 2018 Appropriation (FYs 18/19/20)	\$19,650,000
ARP Obligations in FY 2018	<u>(\$8,108,662)</u>
ARP FY 2018 Funding Balance (as of 9/30/18)	\$11,541,338

FY 2018 ARP Project Updates

The following information provides an update on the 10 ARP projects that were funded in FY 2018 with obligations greater than \$10,000.⁶

The SLSDC continues to use contract vehicles that promote small and disadvantaged businesses as well as Federal contract programs offered by the General Services Administration (GSA), including e-Buy, AutoChoice, and the Federal Supply Schedule, whenever possible.

(1) Project No. 8: Floating Navigational Aids – Upgrade/Replace

General Description: This is an ongoing program to replace floating navigational aids/buoys and winter markers that have been damaged over the years and to upgrade the lights on the buoys. This project also includes testing all-season buoys to determine if they will be effective for use in the Seaway. The Corporation is responsible for 101 buoys (one light per unit) and 59 winter markers along a 120-mile portion of the St. Lawrence Seaway.

Type of Project: Capital Project / Non-Capital Maintenance Project

Mission Objective: Waterway Management

FY 2018 President's Budget: \$100,000

FY 2018 Obligations: \$190,544

Total Obligations (FYs 2009-2018): \$537,027

Project Update (as of September 30, 2018): In FY 2018, the SLSDC made four contract awards related to all-season buoys and its on-going work to test the effectiveness of all-season floating navigational aids. Most notably, the SLSDC awarded a contract to the U.S. Coast Guard (USCG), Washington, D.C. (government; fixed price contract) for \$84,194 for the purchase of six red and green all-season buoys.

Additionally, the SLSDC awarded a contract to Go Deep International, Saint John, New Brunswick, Canada (foreign; fixed price contract; sole source⁷) for \$69,250 for four all-season buoys with self-contained lanterns. The all-season buoys from Go Deep International were successfully tested by the USCG in heavy ice conditions over a two-year period.

⁶ There were four ARP projects with FY 2018 obligations below \$10,000 that are not reported in the project update section: Project No. 11: Fixed Navigational Aids – Rehabilitate (\$4,198); Project No. 17: Navigation Channels – Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments (\$6,566); Project No. 22: Both Locks – Install Vessel Self Spotting System (\$4,501); and Project No. 41: Snell Lock – Install Ice Flushing System Technologies (\$1,320).

⁷ The authority to award on a sole source basis is in the Federal Acquisition Regulation (FAR) 6.302-1; only one responsible source and no other supplies or services will satisfy agency requirements.

The Go Deep International year-round ice buoy allows the marine crew to use a small workboat to remove the self-contained light used throughout the normal navigation season in the fall and replace it with an ice lantern; and then re-install the self-contained light in the spring without having to completely remove the buoy from the water. The buoy would not have to be lifted out of the water except when it's found off-station or for a mooring inspection. This reduces the number of conventional buoys to be commissioned and decommissioned, thus saving the SLSDC time and money.

The SLSDC also awarded a contract to Carmanah Technologies Corporation, Victoria, British Columbia, Canada (foreign; fixed price contract, sole source) for \$24,101 for lanterns to be used on the all-season buoys. These lanterns are specifically designed and tested for use on the all-season buoys purchased through the USCG.

(2) **Project No. 9: Corporation Equipment – Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment**

General Description: This is an ongoing program to replace heavy and light equipment, vehicles, and shop equipment as they become worn out and unserviceable. Heavy and light equipment include such items as a crane, dump truck, snowplow, backhoe, grader, front end loader, air compressor, forklift, and welder. Shop equipment includes such items as a lathe, drill press, vehicle hoist, and milling machine. Equipment and vehicles are inspected regularly and their replacement is prioritized based on the results of those inspections.

Type of Project: Capital Equipment / Capital Project / Non-Capital Maintenance Project

Mission Objective: Lock Operation Upgrade and Maintenance / Waterway Management

FY 2018 President's Budget: \$500,000

FY 2018 Obligations: \$156,648

Total Obligations (FYs 2009-2018): \$3,067,791

Project Update (as of September 30, 2018): In August and September 2018, the SLSDC purchased work-related light equipment and vehicles for its Massena, N.Y. operations. The vehicles purchased through the GSA Heartland Finance Center, Kansas City, Mo. (GSA AutoChoice), totaled \$68,957 and included a 2018 Ram 4x4 pickup truck with crew cab and two Hyundai Tucson 4x4 SUVs. The light equipment included a Ventract tractor with mower attachment for \$25,848 purchased from Venture Products, Orville, Ohio (small business; fixed price contract; Federal Supply Schedule), a Kubota utility vehicle/tractor for \$17,323 purchased from Walldroff Farm Equipment, Watertown, N.Y. (small business; fixed price contract; simplified acquisition/request for quotation), and a Deep Trekker underwater remotely operated vehicle (ROV) for \$9,899 purchased from Brownie's Southport Divers, Fort Lauderdale, Fla. (small business; micro-purchase).

(3) **Project No. 10: Both Locks – Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities**

General Description: This project is for upgrading the infrastructure that supplies power to Eisenhower and Snell Locks and to the Corporation's Maintenance Facility. The power is furnished directly from the Moses-Saunders Power Dam over infrastructure that is 60 years old. The loss of power from the Moses-Saunders Power Dam makes it necessary to use diesel generators, which are expensive to operate, in order to continue operation of Eisenhower and Snell Locks and the Maintenance Facility. Additionally, the diesel generators will not provide enough power to support all lock and maintenance operations.

Type of Project: Non-Capital Maintenance Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2018 President's Budget: \$50,000

FY 2018 Obligations: \$23,200

Total Obligations (FYs 2009-2018): \$465,288

Project Update (as of September 30, 2018): In FY 2018, the New York Power Authority (NYPA) continued its on-going rehabilitation of the infrastructure that supplies power to the SLSDC for operations and maintenance activities. This is a recurring annual ARP project with expenditures dependent on NYPA plans. In September 2018, the SLSDC paid \$23,200 to NYPA, White Plains, N.Y. (fixed price contract; sole source), for its work on SLSDC power-related infrastructure rehabilitation, which included replacement of the insulators on one of the power structures connecting NYPA to the SLSDC and new system switching upgrades.

(4) **Project No. 12: Corporation Equipment – Upgrade/Replace Floating Plant/Tugs**

General Description: This project is for rehabilitating and/or replacing the Corporation's floating plant that is utilized for maintaining the locks and navigation channels. This multi-year project includes: replacing the SLSDC's tugboats *Robinson Bay* and *Performance*; upgrading the buoy tender barge; purchasing a boat to be used for hydrographic surveying with upgraded surveying equipment; purchasing a small boat for emergency response; purchasing small boats for navigation aid maintenance; purchasing a spud barge/scow for work on navigational aids and for emergency/spot dredging; and rehabilitating the SLSDC's crane barge/gatelifter *Grasse River*, which would have to be utilized if a miter gate were damaged and had to be replaced.

Type of Project: Capital Equipment / Capital Project / Non-Capital Maintenance Project

Mission Objective: Lock Operation Upgrade and Maintenance / Waterway Management

FY 2018 President's Budget: \$0

FY 2018 Obligations: \$4,600,729

Total Obligations (FYs 2009-2018): \$32,068,227

Project Update (as of September 30, 2018): During FY 2018, the SLSDC issued five contract modifications totaling \$4,099,884 to Gulf Islands Shipyards, LLC, Houma, La. (small business), related to the construction of its new ice-class tugboat.



The hull of the SLSDC's new ice class tugboat at Gulf Islands Shipyards in Houma, La., on June 26, 2018, at the official keel-laying ceremony.

The SLSDC issued two additional contracts/modifications in FY 2018 related to the new tugboat construction – a contract award for \$98,886 to MiNO Marine, Jefferson, La. (small business; time and materials contract; negotiated procurement), for inspection services during construction of the new tug and a contract modification for \$60,000 to Robert Allan Ltd., Vancouver, British Columbia, Canada, for design/submittal review services during the construction phase of the new tug.

In FY 2018, Gulf Island Shipyards began construction on the SLSDC's new ice-class tugboat. A keel-laying ceremony took place on June 26, 2018 at the shipyard and was attended by SLSDC representatives. Once delivered in September 2019, the vessel will replace the SLSDC's 60-year-old tug *Robinson Bay*. The new vessel will be 118 feet in length with a 45-foot beam (width) and will be ice-classed and capable of breaking up to 36 inches of ice.

The new tugboat will further enhance the SLSDC's ability to quickly and effectively respond to emergency operational incidents on the St. Lawrence Seaway. In addition, the new tugboat will achieve greater operational and cost-savings efficiencies, especially for ice breaking and ice management during the Seaway opening and closing periods and for buoy maintenance and retrieval/placement at the end and start of each navigation season. The new tugboat will allow SLSDC marine crews to replace a buoy without having to push the Corporation's buoy tending crane barge to the site to replace a buoy. Also, crews will be able to stay onboard the new tugboat during multi-day buoy tending operations at the beginning and end of each navigation season which should result in avoiding lodging and other travel-related expenses that have been incurred in the past.

(5) **Project No. 14: Corporation Facilities – Replace Paving and Drainage Infrastructure**

General Description: This project is for improving the pavement and drainage along lock approach walls as well as the roadways, public parking, and work areas at all Corporation facilities. In Upstate New York, the damage to pavements caused by winter conditions is significant. If repairs are not made before the damage is too severe, complete replacement of the pavement down to and often including the base materials is required at a much higher cost.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance / Facility-Equipment Upgrade and Maintenance

FY 2018 President's Budget: \$0

FY 2018 Obligations: \$250,000

Total Obligations (FYs 2009-2018): \$2,208,260

Project Update (as of September 30, 2018): In September 2018, the SLSDC awarded a contract for \$250,000 to Construction Solutions Group, St. Louis, Mo. (small business; sealed bid contract; award based on lowest bid) to replace approximately 5,500 square yards of base material and pavement at Snell Lock. This work to rehabilitate deteriorated pavement in work areas and roadways on the north side of the lock was completed in the fall.

(6) **Project No. 19: Corporation Facilities – Upgrade Electrical Distribution Equipment**

General Description: This project is for upgrading electrical distribution equipment at both Eisenhower and Snell Locks and at the Maintenance Facility to ensure continued reliability. Much of this equipment is 60 years old.

Type of Project: Capital Project / Non-Capital Maintenance Project

Mission Objective: Lock Operation Upgrade and Maintenance / Facility-Equipment Upgrade and Maintenance

FY 2018 President's Budget: \$0

FY 2018 Obligations: \$75,000

Total Obligations (FYs 2009-2018): \$1,303,817

Project Update (as of September 30, 2018): In February 2018, the SLSDC awarded a contract for \$75,000 to NKB & RAM-TECH JV, Syracuse, N.Y. (small business; time and materials contract; fair opportunity – IDC contract holders), to conduct a comprehensive electrical system study including arc flash hazard analyses and to provide engineered recommendations for repairing or replacing deficient equipment.

(7) Project No. 23: Both Locks – Install Hands-Free Mooring System

General Description: This project is for installing the hands-free mooring system at both Eisenhower and Snell Locks to hold vessels in place while they are in the lock instead of using wire ropes deployed by the vessel's crew and placed on bollards on the lock wall by SLSDC personnel. The HFM system uses vacuum pads, each of which provides up to 20 tons of holding force, mounted on vertical rails inside the lock chamber wall to secure the ship during the lockage process as it is raised or lowered while keeping it at a fixed distance from the lock wall. The last step in the lockage operation consists of releasing the vacuum and retracting the pads so that the vessel can sail safely out of the lock.

Once fully implemented at the U.S. and Canadian Seaway locks, the system will produce significant benefits involving workplace safety, carrier operating costs, transit efficiencies, and system competitiveness. The Canadian SLSMC initiated this project and began testing the new technology at their Welland Canal locks in 2007. Testing led to a fourth-generation design, which includes three units with two vacuum pads on each unit, mounted in slots in the lock chamber wall. The SLSMC completed installation at its locks and the system was fully functional early in the 2017 navigation season. The SLSDC's HFM system became operational at Eisenhower Lock in September 2018 and Snell Lock is expected to become operational during the 2019 navigation season.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2018 President's Budget: \$3,000,000

FY 2018 Obligations: \$2,069,631

Total Obligations (FYs 2009-2018): \$23,479,244

Project Update (as of September 30, 2018): In FY 2018, the SLSDC continued to successfully work toward meeting its goal of installing the new HFM technology at both U.S. Seaway locks.

Throughout FY 2018, the SLSDC worked with the HFM equipment manufacturer (Cavotec) and various contractors to complete the construction of the HFM system utility building, install the three vacuum pad units in the slots at Eisenhower Lock, provide system training for lock crews and supervisors, and test and commission the HFM system. These activities culminated with the official launch of the HFM system at Eisenhower Lock on September 19, 2018. The system worked well throughout the remainder of the 2018 navigation season and lock crews reported noticeable time savings in transiting commercial ships through the lock.

There were several contracts awarded and contract modifications issued during FY 2018 to complete the work at Eisenhower Lock. These included:

- Three contracts to Cavotec Canada, Markham, Ontario, Canada (large business; sole source; fixed price contract), for \$623,935 to install anti-syphon equipment for the hydraulic power units, provide additional HFM system screens, and purchase spare parts that are specifically made for the HFM system and are only available from Cavotec.
- A contract to Dow Electric, Malone, N.Y. (small business; sealed bid; fixed price contract) in June 2018 for \$526,231 for the HFM equipment and control system installation at Eisenhower Lock during the 2018 navigation season. This total included one contract modification in September 2018 for \$27,331 for additional work.
- A contract to Quality Control Services, Cleveland, Ohio (small business; 8(a) sole source; time and materials contract), in October 2017 for \$452,658 to perform inspection and testing services for the HFM slot construction at Snell Lock. This amount includes one contract modification in August 2018 for \$100,000 for additional work during the 2019 winter work.
- Also in FY 2018, the SLSDC continued work on the construction phase of the HFM system at Snell Lock. During the winter months in 2018, Tioga Construction Company, Inc., Herkimer, N.Y. (small business), completed the first year of a two-year capital project to perform the slot construction and rail installation at Snell Lock. The contract for this work will be completed during the 2019 winter months. In addition, Loran Construction Inc., Hogansburg, N.Y. (small business), began work on the HFM utility building at Snell Lock that is expected to be completed in early 2019. This \$1.3 million contract was awarded in FY 2017.



Work crews install the hands-free mooring units at Eisenhower Lock.

(8) Project No. 29: Eisenhower Lock – Walls, Sills, and Culverts – Rehabilitate Concrete

General Description: This project is to replace deteriorated/damaged concrete at Eisenhower Lock. This includes concrete that was of poor quality when placed during original construction and concrete that has been damaged by freeze-thaw cycles and by vessel impacts. This deteriorated/damaged concrete, ranging in depths between approximately 8 inches and 24 inches, includes the mass concrete that forms the locks walls, the walls, floors and ceilings of the filling and emptying culverts and the gate sills.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2018 President's Budget: \$0

FY 2018 Obligations: \$604,926

Total Obligations (FYs 2009-2018): \$1,637,489

Project Update (as of September 30, 2018): The SLSDC awarded two contracts and issued two contract modifications related to Eisenhower Lock concrete rehabilitation performed in the south filling and emptying culvert and in the four culvert valve recesses during the 2018 and 2019 winter seasons.

- Contract Award for 2019 Winter Work Concrete Rehabilitation – A contract to Shotcrete Montana LLC, Billings, Mont. (small, woman-owned business; fixed price contract; sealed bid, award based on lowest bid), in September 2018 for \$276,992 to perform the concrete rehabilitation work in the four culvert valve recesses at Eisenhower Lock following the conclusion of the 2018 navigation season. A total of 52 cubic yards was replaced.
- Equipment Lease – A contract to Adirondack Tool Company, Plattsburgh, N.Y. (small business; fixed price contract; simplified acquisition/request for quotation), in January 2018 for \$9,654 to lease equipment for winter work projects during the 2018 winter work period including concrete replacement at Eisenhower Lock.
- Contract Modifications for 2018 Winter Work Concrete Replacement – Two contract modifications in February 2018 to Patterson-Stevens Inc., Tonawanda, N.Y. (small business), totaling \$227,500 for additional cubic yards replaced in the south filling and emptying culvert during the 2018 winter work period. A total of 166 cubic yards was replaced.

(9) Project No. 61: Both Locks – Replace Recess Covers on Lock Walls

General Description: This is a multi-year project to replace steel and steel/concrete composite covers that are used to access the lock operating machinery located in the galleries and recesses at both locks. Many of these recess covers are original and will be over 60 years old when replaced. They have deteriorated due to the use of salt to keep the areas in which these covers are located clear of ice and they have been damaged by trucks and heavy equipment driving over them. The SLSDC will replace them with more durable/maintainable materials designed for greater loads.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance / Facility-Equipment Upgrade and Maintenance

FY 2018 President's Budget: \$25,000

FY 2018 Obligations: \$70,323

Total Obligations (FYs 2009-2018): \$167,992

Project Update (as of September 30, 2018): The SLSDC awarded several contracts in FY 2018 to procure supplies and materials to fabricate recess covers for installation on the lock walls to restore and/or improve the load-carrying capacity of those covers and to keep water from damaging the lock operating equipment below. SLSDC staff fabricated and installed the covers. The main contract was awarded to J&S Steel LLC, Plattsburgh, N.Y. (small business; fixed price contract; simplified acquisition based on lowest price), totaled \$9,107, and provided enough materials to fabricate four steel recess covers for the two U.S. Seaway locks ranging in size from 6 feet by 12 feet to 8 feet by 13 feet. In addition, SLSDC staff built two 17 feet by 21 feet aluminum winter covers for the culvert valve recesses to provide improved weather and fall protected access to these work areas during the winter season. SLSDC staff costs in FY 2018 associated with this project was \$56,617.

(10) Project No. 71: Corporation Facilities – Facility and Underground Utilities Improvements

General Description: This project is to repair and/or replace corroded/malfunctioning underground utilities including water, wastewater, storm drain, and air piping as well as electrical conduits and conductors. It also includes surveying Corporation facilities and underground utilities to locate existing features and revise facility maps and master utility plans. Various improvements and additions over the years have necessitated the need to verify the type and location of all existing facilities and utilities and update this information on record documents, maps, and plans.

Type of Project: Capital Project and Non-Capital Maintenance Project

Mission Objective: Facility-Equipment Upgrade and Maintenance

FY 2018 President's Budget: \$0

FY 2018 Obligations: \$51,076

Total Obligations (FYs 2009-2018): \$51,076

Project Update (as of September 30, 2018): The SLSDC awarded a contract to Ravi Engineering and Surveying, Rochester, N.Y. (small business; fixed price contract; negotiated procurement – award based on best value using evaluation factors), in September 2018 to provide utility mapping and topographical surveying of SLSDC facilities in Massena, N.Y. The mapping and survey are expected to be completed in early 2019 and will be used to update the SLSDC's existing facility maps and master utility plans.

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SLSDC Asset Renewal Program (ARP) Expenditures, Open Obligations, and PC&B (FYs 2009-2018)

ARP #	ARP Project Description	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
1	Both Locks - Upgrade Fendering on Approach Walls	\$245,404	\$34,930	\$0	\$0	\$0	\$188,725
2	Both Locks - Rehabilitate Downstream Miter Gates	\$0	\$0	\$3,548,985	\$17,543	\$3,033,060	\$223,730
3	Both Locks - Rehabilitate Mooring Buttons, Pins, and Concrete Along Guidewalls and Guardwalls	\$952,015	\$51,501	\$0	\$395	\$0	\$0
4	Both Locks - Culvert Valve Machinery - Upgrade to Hydraulic Operation	\$4,135,197	\$441,130	\$4,010,108	\$609,971	\$262,687	\$4,602
5	Both Locks - Rehabilitate Winter Maintenance Lock Covers	\$66,362	\$19,470	\$77,446	\$69,380	\$68,470	\$88,636
6	Seaway International Bridge - Perform Structural Rehabilitation and Corrosion Prevention	\$3,104,251	\$5,680,775	\$0	\$0	\$0	\$0
7	Both Locks - Culvert Valves - Replace With Single Skirt Valves	\$2,155	\$331,356	\$111,059	\$306,898	\$8,745	\$1,385,149
8	Floating Navigational Aids - Upgrade/Replace	\$61,254	\$45,576	\$0	\$0	\$32,273	\$68,149
9	Corporation Equipment - Replace Heavy and Light Equipment, Maintenance Vehicles, and Shop Equipment	\$1,577,143	\$488,592	\$122,469	\$81,623	\$137,393	\$227,151
10	Both Locks - Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities	\$19,594	\$232,079	\$97,979	\$28,003	\$17,099	\$38,320
11	Fixed Navigational Aids - Rehabilitate	\$66	\$29,173	\$18,454	\$23,311	\$33,397	\$14,199
12	Corporation Equipment - Upgrade/Replace Floating Plant	\$763,960	\$1,638,737	\$1,997,992	\$2,189,954	\$893,713	\$609,459
13	Corporation Facilities - Replace Roofs	\$146,481	\$494	\$9,740	\$96,894	\$45,240	\$0
14	Corporation Facilities - Replace Paving and Drainage Infrastructure	\$0	\$1,839,051	\$115,588	\$0	\$3,622	\$0
15	Eisenhower Lock Highway Tunnel - Rehabilitate	\$32,184	\$284,465	\$102,394	\$9,020	\$953	\$1,164,656
16	Corporation Technologies - Upgrade GPS/AIS/TMS	\$106,167	\$83,232	(\$1,730)	\$10,000	\$6,350	\$0
17	Navigation Channels - Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments	\$4,298,696	\$13,359	\$3,675,679	\$118,885	\$4,936	\$465
18	Eisenhower Lock - Vertical Lift Gate - Replace Wire Ropes	\$1,458	\$496,528	\$134,194	\$311,286	\$0	\$0
19	Corporation Facilities - Upgrade Electrical Distribution Equipment	\$0	\$782,793	\$379,980	\$55,253	\$2,687	\$720
20	Both Locks - Upgrade Lock Status/Controls	\$31,207	\$162,661	\$114,248	\$134,044	\$202,941	\$157,659
21	Both Locks - Compressed Air Systems - Upgrade/Replace	\$22,123	\$828,924	\$23,393	\$2,792	\$33	\$0
22	Both Locks - Install Vessel Self Spotting Equipment	\$0	\$483	\$0	\$563	\$3,975	\$503,659
23	Both Locks - Install Hands-Free Mooring System	\$0	\$0	\$0	\$0	\$0	\$705,140
24	Both Locks - Structural Repair - Grout Leaks in Galleries and Recesses	\$38,799	\$0	\$0	\$2,812	\$0	\$0
25	Corporation Facilities - Upgrade/Replace Fire Alarm/Protection Systems	\$25,409	\$624	\$31,298	\$0	\$0	\$0
26	Corporation Facilities - Upgrade Storage for Lock Spare Parts and Equipment	\$0	\$421,778	\$29,188	\$143	\$1,124,640	\$32,475
27	Corporation Facilities - Replace Windows and Doors and Repair Building Facades	\$0	\$35,635	\$8,725	\$13,422	\$4,715	\$0
29	Eisenhower Lock - Walls, Sills, and Culverts - Rehabilitate Concrete	\$0	\$214,227	\$0	\$0	\$452	\$0
31	Both Locks - Rehabilitate Upstream Miter Gates	\$2,207,523	\$2,497,234	\$391,013	\$47,113	\$521	\$0
32	Snug Harbor - Rehabilitate Spare Gate Storage and Assembly Area	\$0	\$13,661	\$351,644	\$16,692	\$2,115,326	\$94,340
33	Both Locks - Upgrade Drainage Infrastructure in Galleries and Recesses	\$0	\$0	\$0	\$542	\$15,351	\$314,642
34	Both Locks - Improve Ice Control	\$0	\$13,518	\$0	\$0	\$0	\$0
38	Both Locks - Upgrade/Replace Emergency Generators	\$0	\$0	\$0	\$0	\$1,784,280	\$380,327
39	Both Locks - Dewatering Pumps - Upgrade Outdated Equipment	\$0	\$0	\$0	\$196,196	\$46,840	\$33,905
41	Snell Lock - Install Ice Flushing System Technologies	\$0	\$1,453	\$282,027	\$11,548,762	\$1,660,795	\$139,238
42	Both Locks - Miter Gates - Structural Rehabilitation	\$0	\$0	\$0	\$9,940	\$2,906,116	\$3,758,337
43	Both Locks - Miter Gate Machinery - Upgrade/Replace	\$0	\$0	\$133,901	\$7,754	\$3,256	\$3,785,656
51	Corporation Facilities - Upgrade Physical Security to Meet HSPD-12 Requirements	\$0	\$26,656	\$22,775	\$365,896	\$41,979	\$24,852
52	Corporation Facilities - Eisenhower Lock Visitors' Center - Replace/Upgrade	\$0	\$0	\$14,318	\$0	\$309,098	\$815,730
53	Corporation Technologies - Upgrade Financial Management System	\$0	\$2,251	\$3,576	\$0	\$0	\$0
54	Corporation Facilities - Administration Building - Replace Elevator	\$0	\$0	\$145,381	\$0	\$0	\$0
55	Corporation Facilities - Maintenance Building - Replace Fuel Tanks	\$0	\$0	\$192,277	\$13,655	\$0	\$0
56	Corporation Facilities - Duty Free Store Property - Upgrade Security	\$0	\$0	\$18,489	\$0	\$0	\$0
57	Corporation Technologies - Upgrade Network Security	\$0	\$0	\$170,633	\$19,478	\$8,687	\$0
58	Corporation Facilities - Upgrades to Meet Sustainability and Energy Goals	\$0	\$0	\$72,311	\$82,641	\$39,976	\$28,678
59	Corporation Facilities - Communications Improvements	\$0	\$0	\$0	\$0	\$0	\$163
60	Both Locks - Improve Access to and Rehabilitate Machinery in Crossovers and Recesses	\$0	\$0	\$0	\$0	\$0	\$0
61	Both Locks - Replace Recess Covers on Lock Walls	\$0	\$0	\$0	\$0	\$0	\$0
65	Both Locks - Install Lock Wall Guardrails	\$0	\$0	\$0	\$0	\$0	\$0
71	Corporation Facilities - Facility and Underground Utilities Improvements	\$0	\$0	\$0	\$0	\$0	\$0
--	Miscellaneous Expenses	\$113,774	\$153,370	\$160,384	\$119,656	\$97,762	\$119,458
	ARP - TOTAL EXPENDITURES, OPEN OBLIGATIONS, AND PC&B	\$17,951,311	\$16,874,735	\$16,565,915	\$16,510,519	\$14,917,365	\$14,908,222
--	Other Than Personnel ARP Costs (contracts, inventory, equipment, supplies)	\$17,473,253	\$16,186,390	\$15,622,733	\$15,719,149	\$14,145,125	\$14,070,068
--	SLSDC ARP Project-Specific Personnel Compensation and Benefits (PC&B)	\$564,284	\$534,975	\$782,798	\$671,714	\$674,478	\$718,696
--	Miscellaneous ARP Costs (non project-specific; general studies; administrative PC&B)	\$113,774	\$153,370	\$160,384	\$119,656	\$97,762	\$119,458

SLSDC Asset Renewal Program (ARP) **Expenditures, Open Obligations, and PC&B (FYs 2009-2018)**

ARP #	ARP Project Description	FY 2015	FY 2016	FY 2017	FY 2018	TOTAL
1	Both Locks - Upgrade Fendering on Approach Walls	\$140	\$0	\$0	\$0	\$469,289
2	Both Locks - Rehabilitate Downstream Miter Gates	\$0	\$0	\$0	\$0	\$6,823,318
3	Both Locks - Rehabilitate Mooring Buttons, Pins, and Concrete Along Guidewalls and Guardwalls	\$0	\$0	\$0	\$0	\$1,003,911
4	Both Locks - Culvert Valve Machinery - Upgrade to Hydraulic Operation	\$0	\$0	\$0	\$0	\$9,463,715
5	Both Locks - Rehabilitate Winter Maintenance Lock Covers	\$12,127	\$0	\$0	\$0	\$401,891
6	Seaway International Bridge - Perform Structural Rehabilitation and Corrosion Prevention	\$0	\$0	\$0	\$0	\$8,785,026
7	Both Locks - Culvert Valves - Replace With Single Skim Valves	\$177,157	\$44,634	\$2,382	\$0	\$2,369,535
8	Floating Navigational Aids - Upgrade/Replace	\$126,064	\$1,969	\$2,198	\$190,544	\$537,027
9	Corporation Equipment - Replace Heavy and Light Equipment, Maintenance Vehicles, and Shop Equipment	\$141,124	\$18,486	\$117,162	\$156,648	\$3,067,791
10	Both Locks - Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities	\$0	\$1,442	\$7,572	\$23,200	\$465,288
11	Fixed Navigational Aids - Rehabilitate	\$26,638	\$8,323	(\$43)	\$4,198	\$157,716
12	Corporation Equipment - Upgrade/Replace Floating Plant	\$318,600	\$9,228,567	\$9,826,516	\$4,600,729	\$32,068,227
13	Corporation Facilities - Replace Roofs	\$285,581	\$34,852	(\$142)	\$0	\$619,140
14	Corporation Facilities - Replace Paving and Drainage Infrastructure	\$0	\$0	\$0	\$250,000	\$2,208,260
15	Eisenhower Lock Highway Tunnel - Rehabilitate	\$61,275	\$30,955	\$0	\$0	\$1,685,902
16	Corporation Technologies - Upgrade GPS/AIS/TMS	\$0	\$0	\$0	\$0	\$204,019
17	Navigation Channels - Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments	\$21,771	\$695	\$0	\$6,566	\$8,141,053
18	Eisenhower Lock - Vertical Lift Gate - Replace Wire Ropes	\$0	\$0	\$0	\$0	\$943,466
19	Corporation Facilities - Upgrade Electrical Distribution Equipment	\$7,384	\$0	\$0	\$75,000	\$1,303,817
20	Both Locks - Upgrade Lock Status/Controls	\$173,819	\$143,268	\$68,326	\$0	\$1,188,171
21	Both Locks - Compressed Air Systems - Upgrade/Replace	\$4,381	\$0	\$0	\$0	\$881,646
22	Both Locks - Install Vessel Self Spotting Equipment	\$8,834	(\$63,174)	\$6,839	\$4,501	\$465,681
23	Both Locks - Install Hands-Free Mooring System	\$10,795,599	\$1,703,212	\$8,205,661	\$2,069,631	\$23,479,244
24	Both Locks - Structural Repair - Grout Leaks in Galleries and Recesses	\$0	\$0	\$0	\$0	\$41,611
25	Corporation Facilities - Upgrade/Replace Fire Alarm/Protection Systems	\$0	\$0	\$0	\$0	\$57,332
26	Corporation Facilities - Upgrade Storage for Lock Spare Parts and Equipment	\$2,751	\$0	\$0	\$0	\$1,610,975
27	Corporation Facilities - Replace Windows and Doors and Repair Building Facades	\$2,655	\$0	\$0	\$0	\$65,151
29	Eisenhower Lock - Walls, Sills, and Culverts - Rehabilitate Concrete	\$0	\$0	\$817,884	\$604,926	\$1,637,489
31	Both Locks - Rehabilitate Upstream Miter Gates	\$0	\$0	\$0	\$0	\$5,143,404
32	Snug Harbor - Rehabilitate Spare Gate Storage and Assembly Area	\$4,295	\$0	\$0	\$0	\$2,595,958
33	Both Locks - Upgrade Drainage Infrastructure in Galleries and Recesses	\$743	\$0	\$0	\$0	\$331,278
34	Both Locks - Improve Ice Control	\$28	\$0	\$0	\$0	\$13,545
38	Both Locks - Upgrade/Replace Emergency Generators	\$63,406	\$1,334	\$0	\$0	\$2,229,347
39	Both Locks - Dewatering Pumps - Upgrade Outdated Equipment	\$21,759	\$0	\$0	\$0	\$298,701
41	Snell Lock - Install Ice Flushing System Technologies	\$162,233	\$11,096	\$3,173	\$1,320	\$13,810,097
42	Both Locks - Miter Gates - Structural Rehabilitation	\$8,372	\$0	\$0	\$0	\$6,682,765
43	Both Locks - Miter Gate Machinery - Upgrade/Replace	\$1,644,855	\$76,166	(\$270)	\$0	\$5,651,318
51	Corporation Facilities - Upgrade Physical Security to Meet HSPD-12 Requirements	\$4,065	\$0	\$0	\$0	\$486,225
52	Corporation Facilities - Eisenhower Lock Visitors' Center - Replace/Upgrade	\$9,479	\$2,183	(\$768)	\$0	\$1,150,038
53	Corporation Technologies - Upgrade Financial Management System	\$0	\$0	\$0	\$0	\$5,827
54	Corporation Facilities - Administration Building - Replace Elevator	\$0	\$0	\$0	\$0	\$145,381
55	Corporation Facilities - Maintenance Building - Replace Fuel Tanks	\$0	\$0	\$0	\$0	\$205,932
56	Corporation Facilities - Duty Free Store Property - Upgrade Security	\$0	\$0	\$0	\$0	\$18,489
57	Corporation Technologies - Upgrade Network Security	\$0	\$0	\$0	\$0	\$198,798
58	Corporation Facilities - Upgrades to Meet Sustainability and Energy Goals	\$37,414	\$12,348	(\$271)	\$0	\$273,097
59	Corporation Facilities - Communications Improvements	\$35,847	\$40,561	\$36,453	\$0	\$113,025
60	Both Locks - Improve Access to and Rehabilitate Machinery in Crossovers and Recesses	\$724,686	\$15,360	\$0	\$0	\$740,045
61	Both Locks - Replace Recess Covers on Lock Walls	\$23,805	\$38,375	\$35,489	\$70,323	\$167,992
65	Both Locks - Install Lock Wall Guardrails	\$593,802	\$19,680	\$0	\$0	\$613,481
71	Corporation Facilities - Facility and Underground Utilities Improvements	\$0	\$0	\$0	\$51,076	\$51,076
--	Miscellaneous Expenses	\$70,158	\$28,908	\$855	\$0	\$864,325
ARP - TOTAL EXPENDITURES, OPEN OBLIGATIONS, AND PC&B		\$15,570,849	\$11,399,239	\$19,129,017	\$8,108,662	\$151,935,833
--	Other Than Personnel ARP Costs (contracts, inventory, equipment, supplies)	\$14,842,669	\$10,892,561	\$18,705,524	\$7,848,121	\$145,505,592
--	SLSDC ARP Project-Specific Personnel Compensation and Benefits (PC&B)	\$658,022	\$477,770	\$422,638	\$260,541	\$5,565,916
--	Miscellaneous ARP Costs (non project-specific; general studies; administrative PC&B)	\$70,158	\$28,908	\$855	\$0	\$864,325